



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/525,231

04/22/2005

Naresh Kumar

4137-44

7197

23117 7590 06/29/2007
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

GUDIBANDE, SATYANARAYAN R

ART UNIT

PAPER NUMBER

1654

MAIL DATE

DELIVERY MODE

06/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,231	KUMAR, NARESH	
	Examiner	Art Unit	
	Satyanarayana R. Gudibande	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 118-235 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 118-235 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Art Unit: 1654

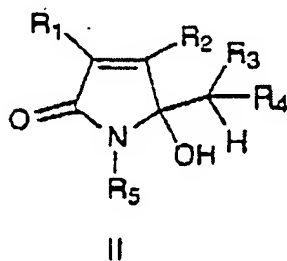
DETAILED ACTION***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

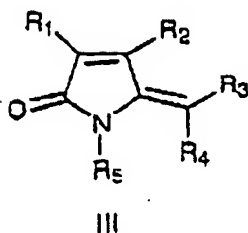
This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 135-141, 118-134, 162-179, 212, 213, 218, 220-222 and 180-181, drawn to compound of formula II as shown below.

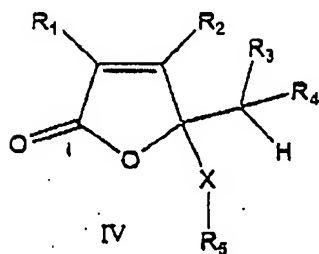


Group II, claim(s) 146-148 and 142-145, drawn to a compound of formula III as shown below.

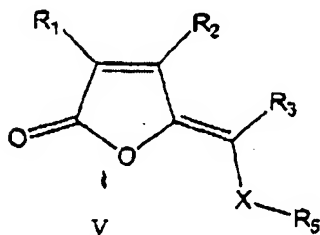


Art Unit: 1654

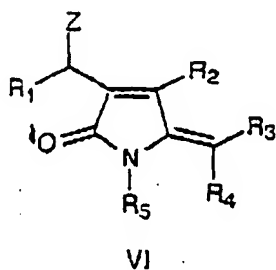
Group III, claim(s) 152-156 and 149-151, drawn to a compound of formula IV as shown below.



Group IV, claim(s) 157, drawn to a compound of formula V as shown below.



Group V, claim(s) 158, drawn to a compound of formula VI as shown below.



Group VI, claim(s) 159-161, drawn to an oligomer formed by oligomerizing or polymerizing a compound of formula II-VI directly or with one or more of other monomers.

Group VII, claim(s) 182-188, drawn to a method or treating an infection or condition in a subject characterized by biofilm formation.

Group VIII, claim(s) 189-210, drawn to a method of treating or preventing biofilm formation on a surface.

Art Unit: 1654

Group IX, claim(s) 211, drawn to a dentifrice, a mouthwash or a composition for the treatment of dental caries.

Group X, claim(s) 214, drawn to a medical device incorporating a compound as defined below comprising a compound in accordance with claim 135.

Group XI, claim(s) 215-216, drawn to an implant device having at least one surface associated with compound as defined below comprising a compound in accordance with claim 135.

Group XII, claim(s) 219, drawn to a shellfish or aquaculture apparatus having at least one surface associated with a compound as defined below comprising a compound in accordance with claim 135..

Group XIII, claim(s) 223, drawn to a method of removing biofilm from a surface comprising the step of administering a cleaning-effective amount of a compound of claim comprising a compound in accordance with claim 135 to a biofilm-containing surface.

Group XIV, claim(s) 224-231, drawn to a method of preventing biofilm formation on a surface comprising the step of administering an effective amount of the compound as defined below comprising a compound in accordance with claim 135 to a surface, wherein the amount is effective to prevent biofilm formation.

Group XV, claim(s) 232, drawn to a dentifrice comprising an effective amount of a compound as defined below comprising a compound in accordance with claim 135.

Group XVI, claim(s) 233, drawn to a mouthwash comprising an effective amount of a compound as defined below comprising a compound in accordance with claim 135.

Group XVII, claim(s) 234-235, drawn to an optical lens, wherein at least a part of a surface of the lens is associated with a compound as defined below comprising a compound in accordance with claim 135.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. Under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

According to PCT Rule 13.2, unity of invention exists only when there is a technical

Art Unit: 1654

relationship among the claimed inventions involving one or more of the same or corresponding special technical features. When Markush groupings is for alternatives of chemical compounds they shall be regarded as being of a similar nature where, A) all the alternatives have a common property or activity and either, B1) a common structure is present, i.e., a significant structural element is shared by all of the alternatives, or B2) in cases where the common structural feature can not be the unifying criteria, all alternatives belong to a recognized class of chemical compounds in the art to which the invention pertains.

In the present instance all the inventions are drawn to compounds of formula II-VI. However, the compounds do not share a common chemical structure and they are not an art-recognized class of compounds. The test for unity of invention requires both A and either B1 or B2 be satisfied. In the instant case the compounds fail to satisfy either B1 or B2. Therefore, no unity of invention exists.

Election of Species

Claims 135, 146, 152, 157 and 158, are generic to the following disclosed patentably distinct species: **compound represented by formulae II-VI**. The species are independent or distinct because as disclosed the different species have mutually exclusive characteristics for each identified species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to **elect a single disclosed species of compound of formula II, III, IV, V or VI with all the variable clearly defined and identified in the structure (for e.g., if applicants elect group I for prosecution, applicants is required**

Art Unit: 1654

to elect a single disclosed species from formula II) for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Claims **120-134**, are generic to the following disclosed patentably distinct species: **compounds such as a biomolecule, polymer, peptide or a polynucleotide, etc.** The species are independent or distinct because as disclosed the different species have mutually exclusive characteristics for each identified species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to **elect a single disclosed species of one of the compounds, for e.g., if applicants elect a peptide for R₅ variable, applicants are required to provide the SEQ ID NO., associated with the peptide that represents the amino acid sequence of the elected species** for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Claims **182 and 184-187**, are generic to the following disclosed patentably distinct species: **disease conditions or infection characterized by biofilm formation that have distinct etiology and affect different patient population.** The species are independent or distinct because as disclosed the different species have mutually exclusive characteristics for each identified species. In addition, these species are not obvious variants of each other based on the current record.

Art Unit: 1654

Applicant is required under 35 U.S.C. 121 to **elect a single disclosed species of disease condition or infection** for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Claims **189-210 and 224-228** are generic to the following disclosed patentably distinct species: **different type of surfaces both organic and inorganic**. The species are independent or distinct because as disclosed the different species have mutually exclusive characteristics for each identified species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to **elect a single disclosed surface** for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Claims **230 and 231**, are generic to the following disclosed patentably distinct species: **species of bacteria, algae, fungi and protozoa**. The species are independent or distinct because as disclosed the different species have mutually exclusive characteristics for each identified species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to **elect a single disclosed species of organism associated with a proper scientific name associated with the bacteria or fungi, etc.**, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

Art Unit: 1654

examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Art Unit: 1654

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satyanarayana R. Gudibande whose telephone number is 571-272-8146. The examiner can normally be reached on M-F 8-4.30.

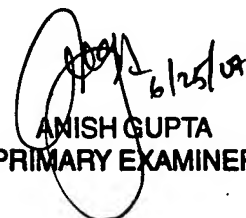
Art Unit: 1654

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Satyanarayana R. Gudibande, Ph.D.
Art Unit 1654



ANISH GUPTA
PRIMARY EXAMINER